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ABSTRACT

Since elementary school counselors frequently provide or interpret achievement test scores for academic placement decisions, they must be vigilant for invalid data. Standardized norm-referenced achievement tests can underestimate achievement or potential of low-income black children because of different learning styles and test bias. Recent research results confirm what many observers have suspected for a long time: standardized test scores are more significantly affected by social class than by race; and cognitive learning styles of low-income black children and their transition from concrete to abstract modes of communication may be different from other groups. Test data can become biased because items are more appropriate for middle class students; norms are not representative of low-income black students; and test readiness is not equally present in all groups tested. A planning model for counselors to avoid the probability of mismeasuring low-income black children on norm-referenced achievement tests includes: (1) review the test manual, especially for test validity, as it relates to low-income black students; (2) conduct workshops to help teachers communicate high expectations and check face validity of test items; (3) conduct workshops for parents to show their role in motivating students and in encouraging test readiness; (4) conduct workshops for students to disseminate test-wiseness information; and (5) evaluate previous workshops in a final workshop with all participants. (BAE)

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The Mismeasurement of Low-Income Blacks: A Quagmire for Counselors

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The Mismeasurement of Low-income Blacks:
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Abstract

The accurate measurement of low-income black children is problematic. A review of the literature highlights the difficulty. A planned model is suggested to improve performance of low-income blacks on norm-referenced achievement tests.

The Mismeasurement of Low-Income Blacks: A quagmire for counselors

Inaccurate test data or information supplied to a counselor can seriously damage the person the counselor is trying to help. Two common ways in which invalid data occur are (a) inappropriate tests and (b) student lack of preparation.

Though educators are expected to check test manuals for test appropriateness, many of the manuals do not provide adequate evidence for validity as it relates to special populations, such as low-income blacks (Cunningham, 1986). In terms of lack of student preparation, the risk to the student increases whenever the student fails to take the test seriously or is not properly prepared for the testing experience.

A quagmire develops when the counselor has to sort out test results that are not a true assessment of the person. Consequently, the elementary school counselor must be vigilant for invalid data since it is the counselor who is frequently requested to provide or interpret achievement test scores for academic decisions which tend to influence how schools place students in different curricula. Oftentimes, it is the low-income black who is victimized by invalid data and placed in inappropriate academic programs (Apple, 1985).

Assessment refers to collecting information about an individual's behavior, aptitudes, abilities, general mental functioning, personality, or related areas, usually through the use of tests (Belkins, 1981). The two types of standardized achievement tests used by school districts are norm-referenced and criterion-referenced. Norm-referenced tests provide information on the relative achievement performance of students, and criterion-referenced tests provide information about what content has been mastered (Roger and Feldman, 1984). These types of test are usually standardized and purportedly objective. That is, the tests have been designed based on response patterns of a larger representative sample, and they do not favor one group over another. Of the two tests criterion-referenced tests are relatively new; less frequently used; and have less well-developed methodologies (Cunningham, 1986). Therefore, norm-referenced achievement tests will be the focus of this article.

REVIEW OF THE LITERATURE

There are two ways in which standardized norm-referenced achievement test underestimate achievement ability or potential of low-income black children (a) learning styles and (b) test bias.

Learning Styles

Two important pieces of research confirm what many observers have suspected for a long time. First, scores on standardized tests are more significantly affected by social class than by race (Roberts and DeBlassie, 1983). According to Roberts and DeBlassie, empirical evidence shows that these tests are not culturally biased against blacks as an ethnic group; rather, lower scores of minorities are more closely related to their ecomonic status. Second, the social psychological characteristics of low-income black children are uniquely different from other groups (Wyche & Wyche, 1984), including black middle-class children, in the areas of cognitive learning styles and transition from concrete to abstract modes of communication.

Wyche & Wyche's review of the literature based on empirical data of low-income black children concludes the following:

1. Low-income black children exhibit delayed-language skills.

2. Low-income black children use global descriptions instead of communicating verbally in a more conceptual manner of categorization and abstractions.

3. The environment of low-income black families fosters early concrete thinking and verbal functioning is less highly developed than in middle-class white families.

In many cases the unique socialization of blacks, which is based on an African heritage and the legacy of slavery and legal segregation, has created a different style of learning as compared to that of the middle-class white children. Hilliard (1976) discusses a number of these differences, based on observations and empirical studies. According to Hilliard, the differences that are incongruent with traditional test taking skills are:

1. Blacks prefer intuitive rather than deductive or inductive reasoning.

2. Blacks approximate concepts of space, number and time rather than strive for exactness.

3. Blacks are more people-oriented than object-oriented.

4. Blacks are likely to depend more on non-verbal skills than on verbal skills.

For these reasons, the economically disadvantaged black child has learning styles that are incongruent with traditional test-taking skills. Additionally, since low-income blacks are less incorporated into mainstream America than middle-class blacks, these students cannot be expected to possess the same competencies that have evolved out of a European philosophical, theoretical and pedagogical context. This special socialization experience makes standardized measurement problematic and the risk of test bias becomes increasingly problable.

Test Bias

Typically, the term test bias is used to describe unfairness in testing. Bias in measurement occurs when "characteristics of the measurer, the measurement process, or the interpretation of the results of the measurement lead to inaccurate inferences about the knowledge, skills or other attributes of an individual or a group" (Anderson, et.al. 1977, p.43).

In general there are three ways in which test data can become biased (a) content validity, (b) norms and (c) lack of test readiness.

Content validity. Content validity is the extent to which a test measures only what it says it measures. When test publishers prepare achievement tests for use in the schools, they base their test specifications on what is commonly taught in many different schools (Gronlund, 1986). However, Spring (1982) argues that the majority of minority students (e.g. low-income blacks) are not taught the same common curriculum as others within a vast number of school districts, thus the standardized test purchased may be appropriate for middle-class students, but not necessarily appropriate for low-income black students.

Furthermore, test items selected are more germaine to middle-class children than to low-income children. Green & Giffore (1980) report minority, especially low-income black children, are more likely to be required to answer

proportionately more questions which are inappropriate for them. That is, a biased test is one which contains a substantial proportion of items solicited from a homogenious tryout group that has few if any low-income black children.

Test publishers who construct norm-referenced achievement tests generally presuppose a homogenous cognitive style irrespective of cultural differences. In keeping with the monocultural frame of reference, the most commonly used item format is multiple-choice since it is believed to be the least biased. However, some of the item-writing guidelines for muliple choice tests are apt to be biased against low-income blacks. Tidewell's (1980) study demonstrated how two common types of item distractors (exotic and lengthy) are more likely to be selected by these youngsters. That is, low-income blacks were more likely than others either to select a response featuring a conspicuously higher vocabulary level than the remaining options, (exotic) or to select a conspicuously longer response than the remaining option (lengthy). Other types of questions which discriminate include verbal analogies and figural series completion (Scheuneman, 1979). Scheuneman's empirical study found that verbal analogies discriminate against low-income blacks by incorrectly assuming a common background in vocabulary possessed by other groups. For example the word "bad" has multiple meanings for low-income blacks which can be positive or negative depending on context. Yet tests of verbal analogies traditionally assume

a negative connotation. With regard to figural series, Scheuneman concluded that low-income blacks were unable to perceive the geometric relationships that were perceived by whites. Her study augments Siller's (1965) findings that the home environment of low-income blacks shapes the child to respond to concrete, tangible and immediate properties of objects and situations rather than abstract, categorical and relational properties. However, it is the abstract, categorical and relational properties which tend to be the basis for many standardized achievement tests.

Norming Process. A common source of bias occurs in the norming process. To create norms, test constructors randomly select a sufficiently large sample that represents the population to be tested. To the extent that the "normed population" proportionally reflects all groups expected to be examined, the test is said to be fair. However, it is extremely unlikely that standardized achievement tests used in most school districts were normed on a majority of low-income black children. Therefore, we should expect to see a skewed distribution of scores, with low-income black children in the bottom range. This in part explains the high percentage of low-income black children scoring at or less than chance, because chance is based in part on earlier statistical information that assumed equal representation. These youngsters are guessing more frequently than other children are guessing. In other words, the achieved scores are inflated by guessing. Hence the probability of chance

as initially computed overpredicts performance of those who are over-represented in the low-scoring group. Wick (1983) confirms the observation that the proportion is highest at low performance levels. Thus the true scores of these children remain problematic.

Test Readiness. A third scource of test bias is the lack of test readiness. Test readiness consists of all social and psychological factors which influence test performance, such as motivation, emotional stability of the student, degree of anxiety and test-wiseness. Many studies have concluded that these factors are not equally present across all groups tested. Though test publishers assume that there are no differences in test readiness, research has shown that:

1) low socioeconomic groups are less test-wise and experience more anxiety about the test (Green & Giffore, 1980).

2) blacks have a different sense of achievement motivation (Castenell, 1983).

3) mulitple choice format is more likely to be biased against blacks (Tidewell, 1980).

4) low-income blacks in particular are more likely not to be test-wise (Brown, 1982).

A PLANNING MODEL

What can an elementary school counselor do to avoid the probability of mismeasuring low-income black children on norm-referenced standardized achievement tests?

Review the test manual.

When reviewing the test manual, the counselor should give particular attention to the test's validity as it relates to low-income black students. Specifically, there are three questions that should be raised:

1. Are the directions clear to these students?

2. Is the vocabulary too difficult or unkown for these students?

3. Are the items of appropriate difficulty for these students?

It is important for all school personnel to remember that norm-referenced achievement tests that are too easy or too difficult for particular group members taking it will produce scores of low reliability (Sax, 1985). Whenever the reliability of a test decreases, the validity of the test can be expected to decrease as well.

In reviewing information on adequate norms, the counselor should carefully examine available information that is provided on how representative the test morms have been created. Gronlund (1985) recommemds that all significant subgroups (e.g. low-income blacks) to be tested

should closely approximate the population distribution reported by the United States Census Bureau in the test norm sample. If the available test manual does not adequately provide the counselor with this information, a quick check of Buros' Mental Measurement Yearbook is recommended. For most tests, these yearbooks provide one or more critical evaluations of published tests.

Conduct workshops for teachers

Teachers should be encouraged to communicate their high expectations of low-income black students' performance either by rewarding pupils' best efforts or conveying the importance of testing for the benefit of the students. This task of increasing teachers' expectations for low-income blacks is needed in many school districts because a recent national study confirms that overall teachers do not expect these students to do well on tests and other academic activities. (Oakes, 1986). Perhaps, a local test expert may be invited to address the importance of pupil motivation as it relatees to test validity.

A check for face validity is an important activity for the school counselor and teacher to share. Face validity is the practice of examining the test items to insure that the test appears to test what was or should have been taught.

Teachers should be reminded of the importance of test climate to improve pupils' performance. For many low-income blacks, their schools are likely to be located in large

urban and poor neighborhoods. In many cases, these schools are lacking physical equipment that can be found in more traditional middle-class sections of the city (McAdoo, 1985). Therefore, it is a good idea to assist teachers in preparing for the testing date by checking or evaluating the adequacy of indoor lighting in the classroom, the reduction of noise from outside of the classroom, and the physical climate comfort of the classroom are just a few concerns that could be discussed.

Conduct Workshops for Parents

Particular attention should be paid to the role parents can play in motivating students to do well on testing. Many parents of low-income blacks assume the schools will bear the responsibility of preparing their children for all school related activities (Ravitch, 1986). As such many parents fail to encourage test readiness in their children. One activity counselors could use in helping these parents would be to send home flyers which explain the importance of adequate sleep and proper eating habits prior to testing. Shortly afterwards a half day workshop should be encouraged to get greater parental involvement.

The half day workshop should include samples of past tests for their inspection; a review of the purpose of the test; an explanation of what the scores may mean and the limitation of all scores in predicting future outcomes; and some helpful suggestions parents may use at home before the

test is actually administered (e.g. whether a student should guess the answer, checking for all needed materials such as pencils, and the importance of taking the test seriously).

Workshops for Students

In addition to the regular test-wiseness information counselors disseminate, it is particularly important to focus on time use and error avoidance. Many low-income black students can be expected not to be familiar with the underlying concepts of the test and knowing how to pace themselves and the practice of rechecking their answers. Brown (1982) suggests a comprehensive program for counselors that deals specifically with time use and error avoidance. Some of the relevant skills that low-income black children need to practice are (a) working in columns and rows, (b) working with fundamental concepts (e.g. opposite, similar, left, right, etc.), (c) exploring main ideas from paragraphs, (d) answering inference questions, (e) using time efficiently (e.g. what to do if you do not know an answer, asking questions about time and checking answers).

Evaluation

In all cases a workshop involving every participant should be scheduled to review which aspects of the previous workshops were helpful and where there is room for improvement after scores have been collected.

CONCLUSION

The juxtaposition of an emerging testing industry and public concern over education have joined to create a climate which suggests that test scores are synonymous with achievement. Though the test publishers have taken steps recently to correct past biases and to control for potential bias, the fact remains that the testing industry pursues large markets based on expected racial, sex and social class representation. As such whenever an anticipated small proportion of a national sample is in fact the majority group in a school, the chance for mismeasurement becomes likely, because the purchased test may be fair for many in the school district but not necessarily for the children in your school.

As counselors, we are called upon to assess students on a number of dimensions. Testing and evaluation serve as integral parts of our resources. Thus we must make a concerted effort not to misuse data and not to treat a single piece of information as the whole.

The review of the literature confirms the problem of obtaining fair test scores for low-income black children. Since test scores are used extensively in the assessment process to legitimate academic decisions, it becomes imperative that counselors protect these youngsters' right to an equal education. Failure to do so is highly unethical.

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